

Remarks/Arguments

The Examiner rejected claims 1-28 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,699,596 (Yano) in view of JP 63-299093 (Kageyama). The Applicants respectfully disagree with the Examiner.

The Examiner states that Yano discloses a barium thioaluminate or magnesium barium thioaluminate phosphor film with europium added as the activator. The Examiner acknowledges that Yano does not disclose a fluoride-containing layer directly adjacent to the blue phosphor thin film layer. The Examiner relies on Kageyama only for teaching the use of a fluoride containing insulating layer between the electrode and the luminescent layer.

First, it is improper for the Examiner to cite the English language abstract of Kageyama as prior art. As noted in MPEP §706.02, subheading "RELIANCE UPON ABSTRACTS AND FOREIGN LANGUAGE DOCUMENTS IN SUPPORT OF A REJECTION", Applicants note that reliance upon an English abstract of a foreign language patent document is improper. As noted in this section, "If the document is in a language other than English and the examiner seeks to rely on that document, a translation must be obtained so that the record is clear as to the precise facts the examiner is relying upon in support of the rejection." (Emphasis added). One reason for this is that the full text document may include teachings away from a rejection when the abstract alone appears to support the rejection. Thus, applicants submit that the Examiner's reliance on the English language abstract is improper and that this rejection must therefore be withdrawn.

Second, even if the Kageyama abstract was a proper reference, and with respect to the combination of references, there is no motivation to combine the two references. As detailed in the response to the previous office action, to properly combine references under 35 U.S.C. §103, there must be some suggestion or motivation to modify or combine reference teachings (MPEP §2143.01).

Here, there is simply no motivation to combine Yano with Kageyama. Kageyama discloses an insulating layer 3 formed directly over the transparent electrode 2, wherein the insulating layer comprises a fluoride of an alkaline earth element, and the layer is a "constituting element of the luminescent layer". Applicants understand this to mean that the insulating layer is integral with and forms

a part of the luminescent layer 3. Yano, on the other hand, discloses a thick-film dielectric material layer 2, which functions as a first insulating layer, that is distinct and separate from the phosphor layer 3 (see col. 6, lines 42-50, which discusses the successive deposition of the different layers). Yano discloses lead titanate, lead niobate, and barium titanate as suitable materials for this layer. Alkaline earth fluorides were well known at the time of Yano, yet there is no indication or suggestion that such materials would be suitable for use in the invention of Yano.

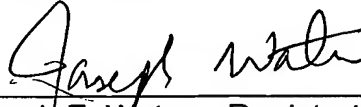
The Examiner indicates that the use of an alkaline earth fluoride would be obvious to produce an electroluminescent element that has "excellent long term stability and reliability". However, there is no indication that the use of the alkaline earth fluoride insulating layer is the sole or even a contributory cause of the "little aging" attributed to the device of Kageyama. This just goes to show the perils in relying on abstracts of references in making rejections. Likewise, there is no indication that such materials would satisfy the properties required of the thick-film dielectric material in Yano, i.e. high resistivity and permittivity (col. 7, lines 17-21). The Examiner has not met her burden of establishing a prima facie case of obviousness.

In addition, Kageyama discloses the use of an alkaline earth chalcogenide as the luminescent material, whereas Yano uses a barium magnesium thioaluminate. An alkaline earth chalcogenide as disclosed by Kageyama is a simple sulfide such as MgS or BaS, not barium or barium magnesium thioaluminate. Applicants disagree that the use of fluoride insulating layers with an alkaline earth chalcogenide (sulfide) phosphor would suggest the use of fluoride insulating layers with a barium or barium magnesium thioaluminate phosphor, since simple sulfides and barium or barium magnesium thioaluminate are chemically and structurally very different and have different electroluminescent properties. There is no indication that the insulating layer of Kageyama would function the same in the device of Yano. Thus, there is no suggestion to combine the two references.

Furthermore, and with regard to new claim 29, there is no indication in either Yano or Kageyama suggesting or disclosing the use of a fluoride layer in addition to a thick-film dielectric layer on a substrate.

In view of the foregoing, the Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Respectfully Submitted,
FAY, SHARPE, FAGAN,
MINNICH & MCKEE, LLP

A handwritten signature in cursive script, appearing to read "Joseph E. Waters".

Joseph E. Waters, Registration No. 50,427
Customer No. 027885
1100 Superior Avenue, 7th Floor
Cleveland, Ohio 44114
(216) 861-5582

L:\JEWDATA\SMB\201007\response.doc